MMIC wideband amplifier BGA2714

Best-in-class LNB performance

Improve the performance of your LNB design with our MMIC wideband amplifier BGA2714. It delivers best-in-class performance at very low current, is small and needs very few external components. In short, it's the ideal 1st stage IF amplifier for LNBs and other low-noise wideband applications.

Key features

- Extremely flat gain curve (21 dB ± 1 dB up to 2.5 GHz)
- Wide frequency range (up to 2.7 GHz @ 3 dB gain bandwidth)
- Internally matched to 50 Ω
- Very low current (4.6 mA @ 3 V)
- Low supply voltage (3 V)
- Good linearity
- Low noise (2.2 dB @ 1 GHz)
- Excellent reverse isolation (> 50 dB up to 2 GHz)
- Unconditionally stable
- Very few external components required
- Compact SOT363 package

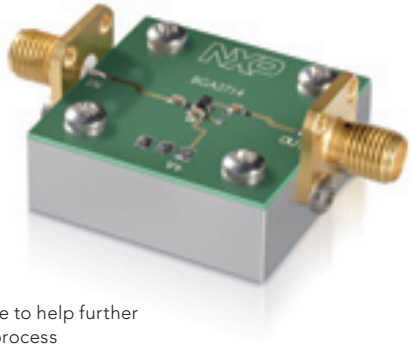
Key applications

- LNB IF amplifier
- General-purpose low-noise wideband amplifier for frequencies up to 2.7 GHz

Our MMIC wideband amplifier BGA2714 is designed to meet the specific needs of LNB designs. It operates from a conveniently low supply voltage with a low supply current.

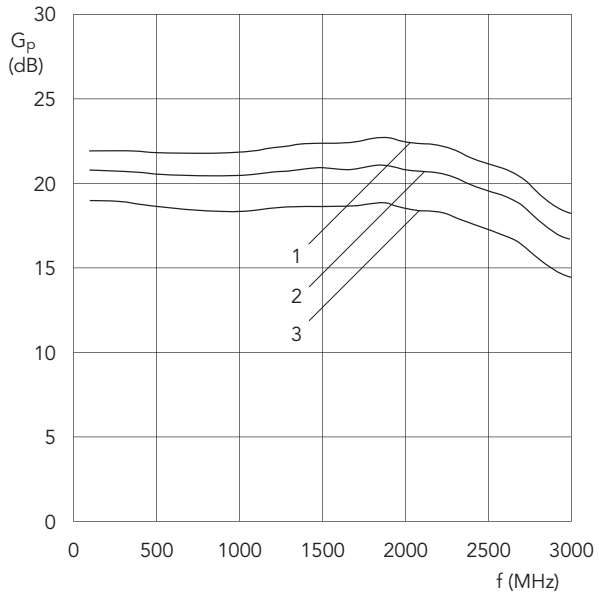
In addition, it delivers industry-leading performance with a wide frequency range, high and flat power gain and low noise. Supplied in a compact, industry-standard SOT363 package, it simplifies system integration.

MMICs like NXP Semiconductors' BGA2714 are smart RF solutions that automatically compensate for temperature and process variations. They integrate transistors, resistors and capacitors into a single device, reducing component count and simplify design. In fact, with the BGA2714 you need just two coupling capacitors and an RF decoupling capacitor.



A demoboard is available to help further simplify your design-in process

NXP founded by Philips



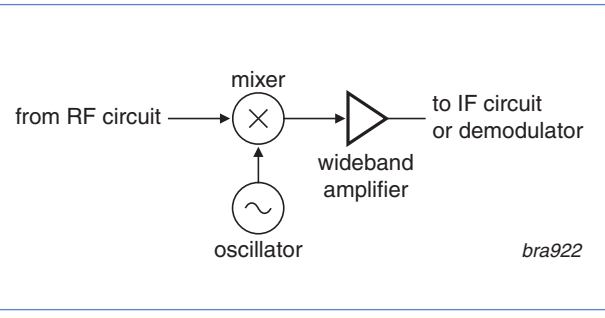
T_{amb} = 25°C; P_{drive} = - 40 dBm; Z_0 = 50 Ω

1 V_s = 3.3 V; I_s = 4.96 mA

2 V_s = 3.0 V; I_s = 4.58 mA

3 V_s = 2.7 V; I_s = 4.16 mA

Power gain as function of frequency; typical values



Application as IF amplifier

Quick reference data

Symbol	Parameter	Condition	Typical value
V_s	supply voltage		3 V
I_s	supply current		4.58 mA
G_p	power gain	1 GHz	20 .4 dB
NF	noise figure	1 GHz	2.2 dB
$PL_{(sat)}$	saturated load power	1 GHz	- 3.4 dBm

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